

REMARKS/ARGUMENTS

Claims

Claims 4, 9, and 14 have been canceled. Claims 1-3, 5-8, 10-13, and 15-22 are pending.

Allowable Subject Matter

The Examiner stated that claims 1-17 are allowed. The applicants' attorney thanks the Examiner for this.

Claim Rejection under 35 USC 103

The Examiner rejected claims 18-22 under 35 U.S.C. 103(a), as being unpatentable over Marieb et al. (2002/0076925) in view of Carlson et al. (3,632,438). It would not be obvious to provide the divalent ion doping of claim 7 of Carlson to form the copper barrier layer of Marieb, as recited in claims 18 and 21. The Examiner failed to point out anything in Carlson or Marieb that teaches that divalent ion doping would be useful in forming a copper barrier layer. Col. 6, line 59, of Carlson discloses the formation of a sodium-barrier layer. Applicants' attorney did not see anything in Carlson that teaches a copper barrier layer. It would not be obvious to use the sodium-barrier layer of Carlson for a copper barrier layer in Marieb. For at least these reasons, claims 18 and 22 are not made obvious by the cited references.

Claims 19, 20, and 22 each depend either directly or indirectly from the independent claims and are therefore respectfully submitted to be patentable over the art of record for at least the reasons set forth above with respect to the independent claims. Additionally, these dependent claims require additional elements that, when taken in the context of the claimed invention, further patentably distinguish the art of record. For at least these reasons claims 19, 20, and 22 are not made obvious by the cited references.

Applicants believe that all pending claims are allowable and respectfully request a Notice of Allowance for this application from the Examiner. Should the Examiner believe that a

telephone conference would expedite the prosecution of this application, the undersigned can be reached at the telephone number set out below.

Respectfully submitted,

BEYER WEAVER & THOMAS, LLP

A handwritten signature in black ink, appearing to read "Michael Lee". The signature is fluid and cursive, with the first name "Michael" written in a larger, more prominent script than the last name "Lee".

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